

ABSTRACT OF THE DISCLOSURE

The invention relates to a method for decomposing bromate ions contained in a liquid. The method includes the sequential steps of bringing the liquid into contact with a photocatalyst; and irradiating the photocatalyst with a light ray having an energy that is not lower than that of a band gap of the photocatalyst, thereby generating a photocatalytic reaction to decompose the bromate ions. The invention further relates an apparatus for decomposing bromate ions contained in a liquid. The apparatus includes a first section for generating therein a photocatalytic reaction to decompose the bromate ions; a photocatalyst adapted to be brought into contact with the liquid in the first section; and a light source for irradiating the photocatalyst with the light ray such that the photocatalytic reaction is generated in the first section when the photocatalyst is in contact with the liquid. Thus, it is possible to efficiently and stably decompose the bromate ions. The photocatalyst may be at least one metal oxide including titanium and a metal having an electronegativity lower than that of titanium. In this case, it is possible to omit pH adjustments of the liquid before and after the photocatalytic reaction.

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